Psychological Services
2017, Vol. 14, No. 2, 129–140

1541-1559/17/$12.00 http://dx.doi.org/10.1037/ser0000112

Predictors of Homeless Services Re-Entry Within a Sample of Adults Receiving Homelessness Prevention and Rapid Re-Housing Program (HPRP) Assistance

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Local and national evaluations of the federal Homelessness Prevention and Rapid Re-Housing Program (HPRP) have demonstrated a high rate of placement of program participants in permanent housing. However, there is a paucity of research on the long-term outcomes of HPRP, and research on rehousing and prevention interventions for single adults experiencing homelessness is particularly limited. Using Homeless Management Information System data from 2009 to 2015, this study examined risk of return to homeless services among 370 permanently housed and 71 nonpermanently housed single adult HPRP participants in Indianapolis, Indiana. Kaplan-Meier survival curves were conducted to analyze time-to-service re-entry for the full sample, and the homelessness prevention and rapid rehousing participants separately. With an average follow-up of 4.5 years after HPRP exit, 9.5% of the permanently housed HPRP participants and 16.9% of those nonpermanently housed returned to homeless services. By assistance type, 5.4% of permanently housed and 15.8% of nonpermanently housed homelessness prevention recipients re-entered services, and 12.8% of permanently housed and 18.2% of nonpermanently housed rapid rehousing recipients re-entered during the follow-up period. Overall, veterans, individuals receiving rapid rehousing services, and those whose income did not increase during HPRP had significantly greater risk of returning to homeless services. Veterans were at significantly greater risk of re-entry when prevention and rehousing were examined separately. Findings suggest a need for future controlled studies of prevention and rehousing interventions for single adults, aiming to identify unique service needs among veterans and those currently experiencing homelessness in need of rehousing to inform program refinement.

Keywords: homelessness, Homelessness Prevention and Rapid Re-Housing Program, HPRP, homeless service use

For more than a decade, there has been a movement within the United States toward homelessness policies and services emphasizing permanent housing over shelter or temporary housing solutions (Culhane, Metraux, & Byrne, 2011; Montgomery, Metraux, & Culhane, 2013). A development of this movement, the U.S. Department of Housing and Urban Development's Homelessness Prevention and Rapid Re-Housing Program (HPRP), was the largest allocation of federal funds to prevent long-term homelessness to date (U.S. Department of Housing and Urban Development, 2011). The $1.5 billion program was implemented between 2009 and 2012 and aimed to reduce the negative social and health outcomes associated with prolonged homelessness by providing individuals and families at risk of homelessness or those who were recently homeless with short-term financial resources. HPRP funds were administered in two ways: (a) financial assistance (e.g., rental assistance, help paying the security or utility deposit for rental housing, moving costs, and short term hotel/motel vouchers), and (b) housing relocation and stabilization services (e.g., case management, housing search and placement assistance, legal services, and credit repair; U.S. Department of Housing and Urban Development, 2009a), thereby aligning with primary and secondary homelessness prevention practices (Burt, Pearson, & Montgomery, 2007; Culhane et al., 2011). By delivering flexible, short-term, and targeted assistance, HPRP grantees endeavored to prevent individuals and families from entering the shelter system or minimize the length of time a family or individual was displaced (U.S. Department of Housing and Urban Development, 2016).

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This work was supported by the Coalition for Homelessness Intervention and Prevention, Indianapolis, Indiana.

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HPRP assisted 1.3 million people comprising 537,000 households, nationally, over the 3-year program (U.S. Department of Housing and Urban Development, 2016). Approximately three quarters of HPRP participants were individuals in families, and one quarter were adults without accompanying children. About 77% of HPRP participants received homelessness prevention assistance and 23% received rapid rehousing services. Single adults accounted for 24% of those receiving prevention assistance, and a greater proportion, 33%, of those receiving rapid rehousing. Immediate housing outcomes were positive, with 89.9% of participants exiting HPRP into permanent housing. By assistance type, approximately 90% receiving prevention and 83% receiving rehousing assistance exited into permanent housing (U.S. Department of Housing and Urban Development, 2016).

Empirical evidence of long-term housing outcomes in HPRP and other prevention and rehousing programs is limited. Current support for such interventions is drawn primarily from local program evaluation reports of varying methodological rigor demonstrating high rates of permanent housing placement or low rates of return to shelter (e.g., Davis & Lane, 2012; Rodriguez, 2013). Moreover, homelessness prevention and rapid rehousing interventions have generally been the focus of efforts to prevent family homelessness, whereas research and practice for reducing homelessness among single adults have prioritized permanent supportive housing (Culhane et al., 2011). To date, the Family Options Study is the largest experimental study of housing interventions of varying intensity, including rapid rehousing, for households with children (Gubits et al., 2015). Families receiving rapid rehousing assistance demonstrated residential outcomes that were nearly equivalent to those receiving usual care services at 18-month follow-up, and both service types yielded poorer residential stability than permanent housing subsidies. When extrapolating the results of housing intervention research on families to single adults, it is important to note that demographic and psychosocial risk factors and correlates of homelessness differ between these two subsets of the homeless population (Culhane, Metraux, Park, Schretzman, & Valente, 2007; Shinn et al., 1998). Compared with families, single adults experiencing homelessness have higher rates of substance use disorders and mental illness and may require housing interventions tailored to their unique needs. As such, research on the effectiveness of "lighter touch" assistance programs, such as HPRP, for promoting long-term housing stability among single adults is needed.

A statewide rapid rehousing evaluation report found the 3-year rate of return to homeless shelter following rehousing was somewhat higher for single adults (18%) than for families (5%; Connecticut Coalition to End Homelessness, n.d.). Byrne, Treglia, Culhane, Kuhn, and Kane (2016) conducted a national study of 2-year outcomes of the U.S. Department of Veteran Affairs (VA) Supportive Services for Veteran Families (SSVF) program, which offers prevention and rehousing assistance for veterans akin to HPRP. Participants' return to VA-funded homeless services following SSVF was examined for single adults and families separately, and findings indicated a greater percentage of single adults returned to services over time than families. For single adults, 17.9% of those receiving prevention assistance, and 26.6% of those receiving rapid rehousing assistance returned to VA homeless services within 2 years. Byrne and colleagues identified predictors of return to services that were shared among families and single adults, as well as those emerging as predictors for one household type but not the other. Older age, male gender, African American ethnicity, and receipt of rental assistance predicted return to homeless services among single adults. Byrne et al.'s study of veterans offers a foundation for future research on housing stability outcomes among other single adult populations receiving prevention and rehousing assistance.

Few research studies or evaluations have conducted longitudinal examinations of re-entry to homeless services among single adults receiving prevention and rehousing services. To date, no peer-reviewed studies have reported long-term outcomes of HPRP—the largest federal effort to prevent the effects of long-term homelessness—for single adults. The present study aims to explore the risk of return to homeless services among permanently and tenuously housed single adult HPRP participants through a longitudinal analysis of Indianapolis, Indiana's Homeless Management Information System (HMIS) data from 2009 to 2015. The following research questions are addressed: (a) What percentage of HPRP participants re-enter homeless services over time, and (b) Which individual and program factors predict re-entry to homeless services over time among permanently housed HPRP participants? As recipients of homelessness prevention assistance and those receiving rapid rehousing assistance likely comprise subsamples with unique risks for homelessness, predictors of re-entry for the two assistance types are also examined separately.

Method

Sample

The sample was derived from the Indianapolis HMIS, a federally mandated administrative database for tracking demographic and homeless service utilization information for individuals and families experiencing homelessness in a local area. In total, the Indianapolis area served 2,477 adults and children in HPRP. Of these, 515 were single adults. The inclusion criteria in the present study included (a) single-adult households enrolled in HPRP between program initiation in 2009 and program termination in 2012, who (b) exited the program in permanent housing. Permanent housing was defined as those residing in permanent supportive housing, private rental or homeownership without a subsidy, staying permanently with friends or family, or residing in other subsidized housing. Participants were not required to complete HPRP to formal discharge to be included in the sample. About one third (32.7%) of participants in the sample did not complete the program for one of the following reasons: they left before formal discharge, they did not comply with the program rules, or their needs could not be met by the program. However, all participants in the sample, regardless of completion, received some form of housing or financial assistance through HPRP, and their housing destinations at discharge were recorded in HMIS. Completers and noncompleters did not significantly differ in the number of support service and financial assistances received. A total of 370 HPRP participants meeting the inclusion criteria were included in the present study.

A separate sample of 71 participants who exited HPRP not literally homeless (i.e., not living on the street or in a shelter) but also not residing in permanent housing was selected from the HMIS for examination of risk of return to homelessness among those in tenuous living situations. These participants

exited HPRP to the following settings: transitional housing, substance abuse treatment or detox facility, hospitals, jail or prison, temporary tenure with friends or family, or motels.

Program Description

Twenty agencies located across Indianapolis received funding from HPRP. United Way of Central Indiana (UWCI) was the primary grantee and acted as primary fiscal agent and led program administration and monitoring. As part of program participation, providers received intensive training from UWCI and the Coalition for Homelessness Intervention and Prevention (CHIP) regarding client eligibility, documentation, record keeping, HMIS data entry, and program reporting. The training included clear standardization of required client and program files, such as income and homelessness certification documents, and assessment information. One assessment was a self-sufficiency matrix that measured client situations across more than 15 domains. Used as a case management tool, it quantified areas for clients and case managers to focus efforts, plan potential goals, or track progress. As the program continued, UWCI and CHIP coordinated monthly trainings to review program guidelines, refresh case managers on HMIS entry and reporting, obtain agency feedback, and provide opportunities for peer support (Officer & Sauer, 2011). Following federal program guidelines, case managers met in person with clients to gather assessment information, verify client eligibility and obtain required documentation such as lease and income information. Program eligibility was recertified every 90 days, and case managers were required to input updated data, such as changes in income or housing status, into the HMIS (Officer & Sauer, 2011).

Materials and Procedure

All data for this study were derived from the HMIS. Data included the following demographics: gender, age, race/ethnicity, and monthly income at program entry and program exit. Participants were identified as having a disabling condition (yes/no). A disabling condition at the time of HPRP implementation was defined as one of the following:

> (1) a disability as defined in Section 223 of the Social Security Act; (2) a physical, mental, or emotional impairment which is (a) expected to be of long-continued and indefinite duration, (b) substantially impedes an individual's ability to live independently, and (c) of such a nature that such ability could be improved by more suitable housing conditions; (3) a developmental disability as defined in Section 102 of the Developmental Disabilities Assistance and Bill of Rights Act; (4) the disease of acquired immunodeficiency syndrome or any conditions arising from the etiological agency for acquired immunodeficiency syndrome; OR (5) a diagnosable substance abuse disorder. (U.S. Department of Housing and Urban Development, 2009b, p. 3)

Finally, veteran status (i.e., veteran vs. nonveteran) was identified among participants. Other demographic variables had a majority of missing data, such as highest education level and whether participants met the federal definition of chronic homelessness, so these data were omitted from analysis.

Self-sufficiency matrix assessment data were also derived from the HMIS. This instrument was developed through the Arizona Evaluation Project on Homelessness and assesses 17 domains related to an individual's independent living skills and level of dysfunction (Culhane, Gross, Parker, Poppe, & Sykes, 2008). Items are scored on a 1 to 5 scale, with higher scores indicating greater self-sufficiency. The HMIS contained data for 350 of the 370 HPRP participants in the current study on the following 15 domains: Income, Employment, Shelter, Food, Childcare, Children's Education, Adult Education, Legal Issues, Health Care, Life Skills, Mental Health, Substance Abuse, Family Relations, Mobility, and Community Involvement. The remaining two domains were added at later points in HPRP implementation, and the data were therefore incomplete. The internal consistency of the 15 domains in the present sample was unacceptable ($\alpha = .54$). Item-total correlations were examined, and the following five domains negatively correlated with the total scale score were removed from calculation of scores: Childcare, Children's Education, Adult Education, Legal Issues, and Health Care. Omission of child-related items is also theoretically justified, as the sample included single adults only. The remaining 10 domains resulted in improved internal consistency, though it remained in the questionable range ($\alpha = .66$). Self-sufficiency scores reflect the mean score across the 10 domains.

In terms of program variables, participants were identified as either receiving homelessness prevention assistance or rapid rehousing assistance. Completion of the program was dichotomized such that individuals were categorized as having completed HPRP or having not completed HPRP. Length of program enrollment was the number of days between program entry and program exit. Receipt of specific forms of financial and support service assistance was dichotomized (0 = did not receive assistance, 1 = received assistance). Services provided to assist a client find more affordable housing, identify and refer to other resources, or work to help stabilize a client's housing situation were types of support services. In general, case managers at HPRP sites provided support services, and financial services were funds paid directly to landlords and utility companies. Financial services included eligible types of temporary financial assistance, such as rent, security deposits, rental arrears, or utility assistance that allowed a client to remain in their housing or removed barriers preventing the client from moving into new housing. Total financial assistance was the computed sum of money provided to participants for rent, security deposits, utilities, utility deposits, and rent and utility arrears.

The study outcome variable was re-entry to homeless services, according to service use tracked in the HMIS, during the follow-up period. As participants enrolled in HPRP at staggering times throughout program implementation, the follow-up period varied across participants. Follow-up spanned from participants' program exit—ranging from October 2009 to June 2012—through September 2015. HMIS data were available for an average of 4.5 years (range = 3.25 to 5.92 years). Participants who re-entered the homeless service system were defined as those who, after exiting HPRP in permanent housing, had a subsequent contact with the following nonpermanent housing services: shelters, transitional housing, safe havens, and SSVF and HPRP rapid rehousing assistance. The number of months between program exit and re-entry to services, or, for those who did not re-enter, the number of months between program exit and the last available follow-up data point, were computed.

Statistical Analysis

Statistical analyses were conducted using SPSS Version 23. Predictive models of re-entry to homeless services were examined. Kaplan-Meier survival curves were used to analyze time-to-event for the full permanently housed sample, and the homelessness prevention and rapid rehousing participants separately. Kaplan-Meier survival curves were also conducted for participants who exited HPRP to nonpermanent housing destinations. The follow-up period was computed in months, with all participants beginning at Month 0, defined as the point in time they exited HPRP into permanent housing. Follow-up months were computed for each participant until one of two possible outcomes occurred: (a) the participant re-entered homeless services, or (b) no additional follow-up data were available for the participant. In the latter case, participants were censored in the Kaplan-Meier curve. The curve illustrates the cumulative probability of "surviving" (i.e., not re-entering homeless services) at a given point in time. Next, risk of re-entry to homeless services over time was examined for the permanently housed sample with a series of univariate Cox proportional hazards models. Enrollment demographics, program-related variables, and circumstances at program exit were entered as predictors of risk for the full sample, and for those receiving homelessness prevention assistance, and those receiving rapid rehousing assistance separately. Finally, a multivariate Cox proportional hazards model was conducted with the full sample. The limited number of participants re-entering reduced the ability to test a robust model, so only select variables were included in the multivariate model. It has been suggested that five or more events (i.e., re-entries) per variable is adequate for multivariate Cox proportional hazards analyses (Vittinghoff & McCulloch, 2007). In addition to age, gender, and race/ethnicity, variables that emerged as predictors of re-entry to homeless services that achieved or trended toward statistical significance (i.e., $p < .1$) in the univariate models were entered in the final model.

Results

Table 1 presents the demographics of the 370 HPRP participants who exited HPRP into permanent housing for the total sample, and for homelessness prevention and rapid rehousing subsamples. Participants were an average of 44.7 years old ($SD = 11.6$). A total of 197 (53.2%) participants were male, 171 (46.2%) were female, and two (0.5%) were transgender or did not disclose their gender. The majority, 256 (69.2%), were African American, 96 (26.7%) were European American, and 18 (4.9%) identified as being from another ethnic background.

Among the secondary sample of 71 single adults who were not literally homeless at HPRP exit but who exited in nonpermanent housing settings, the average age was 40.3 years ($SD = 11.2$). Regarding gender, 36 (50.7%) participants were female, 34 (47.9%) were male, and one (1.4%) did not disclose their gender. A total of 42 (59.2%) were African American, 26 (36.6%) were European American, and three (4.2%) were multiracial or identified another ethnic background. Thirteen (18.3%) were veterans, and 16 (22.5%) had a disabling condition. In terms of assistance received, 38 (53.5%) received homelessness prevention assistance, and 33 (46.4%) received rapid rehousing assistance. Participants exited to a range of nonpermanent destinations; 39 (54.9%) exited to a temporary living situation with friends or family, 11 (15.5%) exited to transitional housing, 8 (11.3%) exited to jail or prison, 5 (7.0%) exited to a hospital or substance abuse treatment facility, 2 (2.8%) exited to a hotel or motel, and 6 (8.5%) exited to another nonpermanent living situation.

Homeless Service Re-Entry

A total of 35 (9.5%) permanently housed HPRP participants re-entered the homeless service system during the follow-up period. By assistance type, nine (5.4%) of the 167 homelessness prevention participants and 26 (12.8%) of the 203 rapid rehousing participants re-entered services. Of those who re-entered, 17 (48.6%) re-entered into homeless shelters, 15 (42.9%) re-entered into transitional housing, two (5.7%) re-entered into a safe haven program, and one (2.1%) re-entered into rapid rehousing. Those re-entering into emergency shelters were significantly younger ($M = 42.94$ years, $SD = 12.40$) than those re-entering to other locations ($M = 49.78$, $SD = 5.16$), $t(33) = 2.15$, $p = .04$. A greater proportion of women re-entered to shelter than men, $\chi^2(1, N = 370) = 15.25$, $p < .001$.

A total of 12 (16.9%) of the 71 nonpermanently housed participants re-entered homeless services during the follow-up period. By assistance type, six (15.8%) homelessness prevention recipients and six (18.2%) rapid rehousing recipients re-entered services. Of those who re-entered, seven (58.3%) re-entered into homeless shelters, three (25.0%) re-entered into transitional housing, and two (16.7%) re-entered into a safe haven program.

Risk of Return to Homeless Services

Figures 1 and 2 present the Kaplan-Meier survival functions for the full sample and the two assistance types, respectively. The curves depict the cumulative proportion of participants who did not re-enter homeless services over time. The first year following program exit exhibited the greatest decline in the proportion of participants remaining housed, with 14 (40.0%) of those who re-entered doing so within the first 12 months. Sixty percent of those who returned to homeless services did so within 24 months of program exit. No homelessness prevention participants re-entered services after 44 months, and no rapid rehousing participants re-entered services after 51 months. Table 2 shows the cumulative Kaplan-Meier survival time estimates by year for the full sample, and the homelessness prevention and rapid rehousing subsamples for those permanently housed at HPRP exit and those who exited to nonpermanent settings. For those permanently housed at program exit, estimated mean survival time was directionally higher for homelessness prevention than rapid rehousing across years, and Breslow generalized Wilcoxon's tests revealed it was statistically significantly higher in Year 4, $\chi^2(1, N = 370) = 4.83$, $p = .03$, and Years 5 and 6, $\chi^2(1, N = 370) = 5.28$, $p = .02$. Finally, Table 3 depicts the Kaplan-Meier survival estimates of the proportion of participants who did not re-enter homeless services by year for those exiting HPRP to permanent and nonpermanent settings.

Program Enrollment and Exit Predictors of Risk

For the overall sample of permanently housed participants, Cox proportional hazards regression analyses revealed no significant difference in the risk of re-entry with regard to age, gender, racial category, income at program entry, and whether a disabling condition was reported (see Table 4). Men were at significantly greater risk of re-entry compared with women among those receiving homelessness

Table 1
Demographics, Program Factors, and Circumstances at Program Exit by Assistance Type Among Those Permanently Housed at Program Exit

Variables	Total (N = 370)	Prevention		Rapid rehousing	
		Re-enterers (n = 9)	Non-re-enterers (n = 158)	Re-enterers (n = 26)	Non-re-enterers (n = 177)
Enrollment demographics					
Age, *M* (*SD*)	44.7 (11.6)	47.7 (7.2)	43.9 (12.6)	46.0 (10.7)	45.0 (10.9)
Gender, *n* (%)					
Male	197 (53.2)	7 (77.8)	63 (39.9)	13 (50.0)	114 (64.4)
Female	171 (46.2)	2 (22.2)	93 (58.9)	13 (50.0)	63 (35.6)
Transgender or gender not disclosed	2 (.5)	0 (.0)	2 (1.2)	0 (.0)	0 (.0)
Race/ethnicity, *n* (%)					
Black/African American	256 (69.2)	6 (66.7)	112 (70.9)	22 (84.6)	116 (65.5)
White/European American	96 (26.7)	2 (22.2)	37 (23.4)	4 (15.4)	53 (29.9)
Other ethnicity	18 (4.9)	1 (11.1)	9 (5.7)	0 (.0)	8 (4.5)
Veteran, *n* (%)	70 (18.9)	5 (55.6)	33 (20.9)	9 (34.6)	23 (13.0)
Disabling condition identified, *n* (%)	79 (21.4)	2 (22.2)	28 (17.7)	8 (30.8)	41 (23.2)
Self-sufficiency score, *M* (*SD*)	2.9 (.5)	3.1 (.8)	2.9 (.5)	3.0 (.4)	3.0 (.5)
Income at program enrollment ($), *M* (*SD*)	524.8 (557.0)	340.7 (373.1)	466.9 (527.4)	614.6 (628.0)	572.7 (576.0)
Program factors					
Completed HPRP, *n* (%)	249 (67.3)	4 (44.4)	110 (69.6)	17 (65.4)	118 (66.7)
Length of enrollment (days), *M* (*SD*)	235.28 (147.5)	202.9 (99.7)	201.7 (130.5)	263.8 (164.3)	262.8 (155.5)
Financial assistance type, *n* (%)					
Rent payment	307 (83.0)	6 (66.7)	131 (82.9)	21 (80.8)	149 (84.2)
Security deposit	212 (57.3)	2 (22.2)	48 (30.4)	23 (88.5)	139 (78.5)
Utility payment	191 (51.6)	5 (55.6)	86 (54.4)	16 (61.5)	84 (47.5)
Utility deposit	99 (26.8)	2 (22.2)	24 (15.2)	10 (38.5)	63 (35.6)
Rent arrears	108 (29.2)	5 (55.6)	74 (46.8)	1 (3.8)	28 (15.8)
Utility arrears	149 (40.3)	4 (44.4)	52 (32.9)	11 (42.3)	82 (46.3)
Moving costs	40 (10.8)	2 (22.2)	14 (8.9)	3 (11.5)	21 (11.9)
Motel voucher	17 (4.6)	0 (.0)	3 (1.9)	1 (3.8)	13 (7.3)
Support service assistance type, *n* (%)					
Case management	342 (92.4)	7 (77.8)	138 (87.3)	26 (100.0)	171 (96.6)
Outreach and engagement	306 (82.7)	6 (66.7)	137 (86.7)	21 (80.8)	142 (80.2)
Housing search and placement	187 (50.5)	3 (33.3)	46 (29.1)	15 (57.7)	123 (69.5)
Credit repair	35 (9.5)	2 (22.2)	10 (6.3)	1 (3.8)	22 (12.4)
Legal	22 (5.9)	1 (11.1)	15 (9.5)	0 (.0)	6 (3.4)
Total financial assistance ($), *M* (*SD*)	3,413.6 (2,536.9)	2,997.6 (2,069.8)	3,764.8 (2,785.6)	2,859.2 (2,332.5)	3,200.7 (2,319.8)
Circumstances at program exit					
Income at program exit ($), *M* (*SD*)	574.8 (660.0)	214.6 (329.1)	554.4 (645.8)	583.3 (629.6)	610.0 (686.9)
Change in income at program exit, *n* (%)					
Did not increase	287 (77.6)	9 (100.0)	117 (74.1)	23 (88.5)	138 (78.0)
Increased	83 (22.4)	0 (.0)	41 (25.9)	3 (11.5)	39 (22.0)
Housing type, *n* (%)					
Housed independently without a subsidy	337 (91.1)	9 (100.0)	152 (96.2)	21 (80.8)	155 (87.6)
Housed with a subsidy	22 (5.9)	0 (.0)	1 (.6)	4 (15.4)	17 (9.6)
Permanently housed with friends or family	11 (3.0)	0 (.0)	5 (3.2)	1 (3.8)	5 (2.8)

Note. HPRP = Homelessness Prevention and Rapid Re-Housing Program.

prevention assistance, hazard ratio = 4.95, 95% confidence interval (CI) [1.03, 23.80], p = .04. African Americans trended toward significantly greater risk of re-entry compared with other racial/ethnic groups among those receiving rapid rehousing assistance, hazard ratio = 2.68, 95% CI [0.92, 7.78], p = .07. Those who were veterans had significantly greater risk of returning to homelessness than non-veterans, hazard ratio = 3.02, 95% CI [1.54, 5.94], p = .002, in the full sample. The significantly greater risk of re-entry among veterans also emerged in the homelessness prevention, hazard ratio = 4.40, 95% CI [1.18, 16.32], p = .03, and the rapid-rehousing subsamples, hazard ratio = 3.06, 95% CI [1.36, 6.86], p = .007. Total monthly income at program entry and program exit were not significant predictors of re-entry. However, whether or not participants increased their income between program entry and program exit trended toward a statistically significant predictor of re-entry in the full sample. Those whose income increased between program entry and program exit had lower risk of re-entering homeless services than those whose income did not increase, hazard ratio = 0.31, 95% CI [0.09, 1.00], p = .05. The type of permanent housing (i.e., subsidized, nonsubsidized, living with friends or family) was not a significant predictor of re-entry.

Program-Related Predictors of Risk

In terms of program factors, whether or not participants completed the program and the length of enrollment in HPRP were not significant predictors of re-entry to homeless services in the full sample and

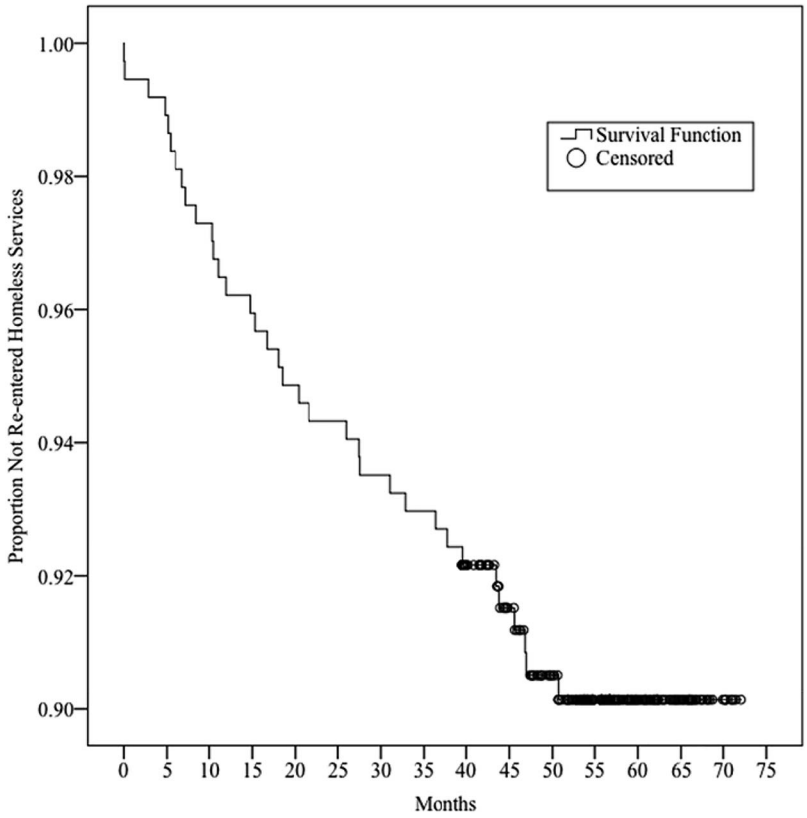

Figure 1. Kaplan-Meier survival curve for 370 program participants over the 72-month follow-up period. The cumulative probability of not re-entering homeless services is indicated on the y-axis, and the number of months since program exit is indicated on the x-axis. "Censored" demarcates individuals who did not re-enter homeless services, but for whom follow-up data points were unavailable beyond that time.

the two assistance type subsamples of permanently housed participants (see Table 4). In the full sample, assistance type emerged as a significant predictor of re-entry, such that receipt of rapid rehousing assistance was associated with greater risk of re-entry than homelessness prevention, hazard ratio = 2.45, 95% CI [1.15, 5.22], $p = .03$. In terms of specific financial and support service assistance types, only receipt of a security deposit approached significance as a risk of re-entry in the full sample, with those receiving a deposit having higher risk, hazard ratio = 1.94, 95% CI [0.93, 4.05], $p = .08$. Among those receiving homelessness prevention assistance, receipt of outreach and engagement services trended toward lower risk of re-entry, hazard ratio = 0.29, 95% CI [0.72, 1.71], $p = .08$, and receipt of credit repair services trended toward higher risk of re-entry, hazard ratio = 3.78, 95% CI [0.78, 18.23], $p < .10$.

Multivariate Model

A multivariate Cox proportional hazards regression analysis was conducted with the full sample of permanently housed participants to examine whether significant or near-significant univariate predictors of risk remained important predictors in the presence of each other. The final model included age, gender and race/ethnicity in the first step, and change in income (i.e., increased vs. did not increase), assistance type (i.e., prevention vs. rehousing), veteran status, and receipt of a security deposit in the second step. The inclusion of the variables in Step 2 significantly improved the model $\chi^2(4, N = 370) = 25.33$, $p < .001$. Findings from the multivariate Cox proportional hazards model are reported in Table 5. Veteran status was a significant predictor of risk of re-entry with an adjusted hazard ratio of 5.38, 95% CI [2.27, 12.73], $p < .001$, indicating that the risk of returning to homeless services were greater over time for those who were veterans compared with those who were not veterans. Increase versus no increase in income was a significant risk factor for return to homeless services, such that those who increased their income were at lower risk, adjusted hazard ratio = 0.28, 95% CI [0.08, 0.91], $p = .03$. Male gender trended toward significantly lower risk of re-entry, adjusted hazard ratio = 0.49, 95% CI [0.22, 1.11], $p = .09$. In the full model, assistance type only approached statistical significance, with rapid rehousing having directionally greater risk of re-entry than homelessness prevention, adjusted hazard ratio = 2.30, 95% CI [0.99, 5.37], $p = .05$. Finally, those receiving financial assistance via a security deposit trended toward greater risk of re-entry, adjusted hazard ratio = 2.04, 95% CI [0.91, 4.55], $p = .08$.

Veteran Re-Entry

As veteran status was the most consistent significant predictor of re-entry among those permanently housed, supplemental analyses were carried out to examine this subpopulation in greater depth. Forty percent of re-enterers were veterans. A greater pro-

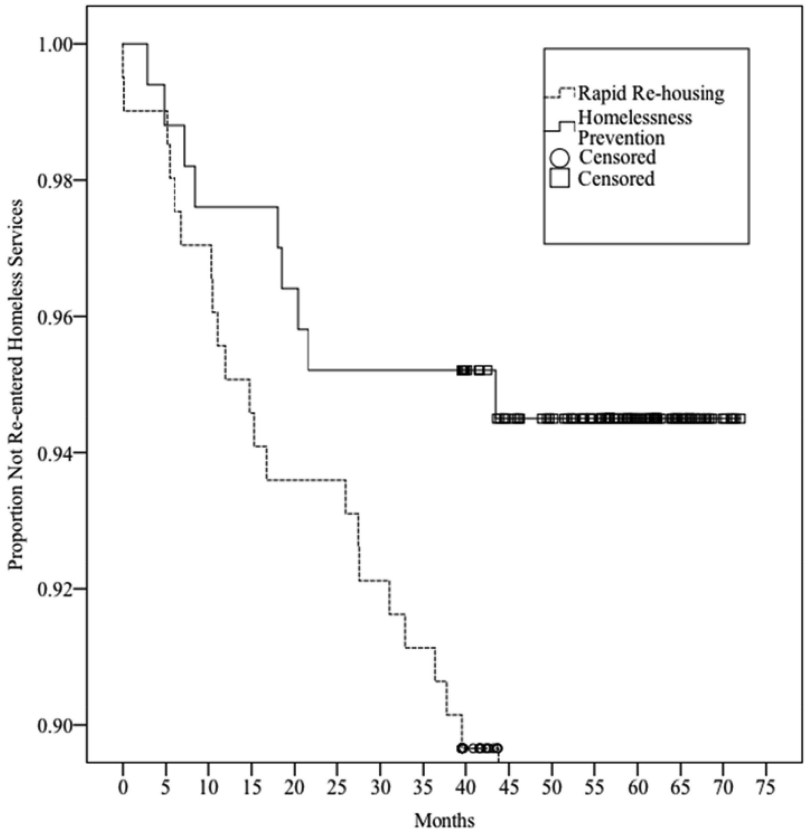

Figure 2. Kaplan-Meier survival curves for homelessness prevention ($n = 167$) and rapid rehousing ($n = 203$) participants over the 72-month follow-up period. The cumulative probability of not re-entering homeless services is indicated on the y-axis, and the number of months since program exit is indicated on the x-axis. "Censored" demarcates individuals who did not re-enter homeless services, but for whom follow-up data points were unavailable beyond that time.

portion of veterans (20.0%) returned to homeless services after exiting to permanent housing than nonveterans (6.7%), $\chi^2(1, N = 370) = 11.20$, $p = .001$. Twelve (85.7%) of 14 veteran re-enterers re-entered into transitional housing. Overall, veterans had significantly higher incomes at program entry, $t(368) = 3.96$, $p < .001$, and exit, $t(368) = 3.29$, $p = .001$, compared with nonveterans. Veteran re-enterers trended toward older age ($M = 50.36$ years, $SD = 5.12$) than nonveteran re-enterers ($M = 43.86$, $SD = 11.46$), $t(33) = 1.99$, $p = .06$, and a significantly greater proportion of veterans were men, $\chi^2(1, N = 370) = 17.50$, $p < .001$. Fifty percent of veteran re-enterers had a disabling condition, which was a significantly greater proportion than nonveteran re-enterers, $\chi^2(1, N = 370) = 5.25$, $p = .02$.

Discussion

This study examined the frequency and predictors of return to homeless services among single adult HPRP participants over an average of 4.5 years after program exit. Overall, a small minority of permanently housed single adults returned to homeless services. Re-entry tended to occur rather soon after assistance was provided, with more than half returning within 24 months. Though data regarding participants' reason for re-entry were not available, it may be that some participants exited the program without adequate resources to remain stably housed long-term and may have benefitted from ongoing support. Notably, among those who exited HPRP in nonpermanent settings, such as temporary tenure with family or friends, treatment facilities, and transitional housing showed a relatively low rate of re-entry to homeless services, 16.9%, given their exits to tenuous living situations. It is possible that these additional services and/or social supports facilitated participants' connections with resources necessary to achieve residential stability.

It is critical to note that re-entry to homeless services based on HMIS data was only a proxy for residential stability among program participants, and findings do not provide definitive evidence for the long-term housing outcomes following HPRP. Participants who did not re-enter services, based on the data available, may have experienced varying forms of transition during the follow-up period, such as using homeless services outside of the HMIS jurisdiction, staying temporarily with friends or family without seeking services, or some may have been deceased. Nevertheless, HMIS data provided a useful starting point to guide future investigations of homeless programs, and several research questions emerged from this study.

Table 2
Cumulative Kaplan-Meier Estimated Survival Time (in Months) by Year for Participants Exiting to Permanent and Nonpermanent Housing Settings

Groups by exit destination and assistance type	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
	Est. mean mos.	95% CI	Est. mean mos.	95% CI	Est. mean mos.	95% CI	Est. mean mos.	95% CI	Est. mean mos.	95% CI	Est. mean mos.	95% CI
Exited to permanent housing settings												
Full sample	11.8	11.7, 11.9	23.2	22.9, 23.6	34.5	22.8, 35.1	45.5	44.6, 46.4	56.3	55.1, 57.6	67.2	65.6, 68.8
Homelessness prevention	11.9	11.7, 12.0	23.5	23.0, 23.9	34.9	34.1, 35.7	46.3[a]	45.1, 47.4	57.6[a]	56.1, 59.2	69.0[a]	67.0, 71.0
Rapid rehousing	11.7	11.5, 11.9	23.0	22.5, 23.6	34.1	33.1, 35.0	44.8	43.4, 46.2	55.2	53.4, 57.1	64.1	61.8, 66.4
Exited to nonpermanent settings												
Full sample	11.5	11.0, 12.0	22.4	21.2, 23.6	32.8	30.8, 34.8	42.8	39.9, 45.7	52.8	48.9, 56.7	62.8	57.9, 67.7
Homelessness prevention	12.0	11.9, 12.0	23.4	22.6, 24.2	34.1	32.3, 35.9	44.3	41.3, 47.3	54.4	50.1, 58.7	64.6	58.9, 70.2
Rapid rehousing	11.0	9.8, 11.9	21.3	18.9, 23.6	31.3	27.5, 35.0	41.1	35.9, 46.3	50.9	44.1, 57.7	60.1	51.9, 68.3

Note. Est. mean mos. = estimated mean months; CI = confidence interval.
[a] Homelessness prevention significantly higher estimated survival time compared with rapid rehousing at $p < .05$.

Consistent with previous research identifying veteran status as a homelessness risk factor (Fargo et al., 2012), veterans in this study were at particular risk of re-entry among both homelessness prevention and rapid rehousing assistance recipients. The percentage of HPRP veterans returning to homeless services (20.0%) was comparable with the national study of SSVF in which 17.9% to 26.6% of SSVF veteran recipients returned to VA homeless services (Byrne et al., 2016). Prior research has demonstrated few demographic or psychosocial differences between homeless veterans and other single homeless adults residing in shelters (Petrovich, Pollio, & North, 2014) and formerly homeless adults in supported housing (Tsai, Mares, & Rosenheck, 2012). In contrast, veteran re-enterers in the present sample trended toward a greater proportion having a disabling condition compared with nonveteran re-enterers. This may be representative of the current sample, which included individuals who were considered to have needs appropriate for a temporary assistance program, whereas the samples in previous studies may have had more extensive homelessness histories and support service needs. For example, those in Petrovich et al.'s (2014) study had an average lifetime homelessness history of 44 to 46 months, and 62% to 82% had an alcohol or drug problem; and those in Tsai et al.'s (2012) study resided in supportive housing, a substantial percentage having a serious mental illness and/or substance use disorder. Thus, among a population of formerly homeless adults with less intensive service needs, veterans may have unique risk factors for future homelessness episodes.

There is limited research comparing service needs and housing outcomes between veterans and nonveterans experiencing homelessness. Tsai and colleagues (2012) found no difference in housing outcomes among homeless veterans and nonveterans in 11 U.S. locations. Given this, it is possible the results of the current study are context specific. However, further research investigating difference in service needs and outcomes between veteran and nonveteran populations is needed, particularly among those re-

Table 3
Cumulative Kaplan-Meier Survival Proportion Estimates by Year for Participants Exiting to Permanent and Nonpermanent Housing Settings

Groups by exit destination and assistance type	Year 1		Year 2		Year 3		Year 4		Years 5 & 6[a]	
	Est. prop.	Std. error	Est. prop.	Std. error	Est. prop.	Std. error	Est. prop.	Std. error	Est. prop.	Std. error
Exited to permanent housing settings										
Full sample	.962	.010	.943	.012	.930	.013	.905	.016	.901	.016
Homelessness prevention	.976	.012	.952	.017	.952	.017	.945	.018	.945	.018
Rapid rehousing	.951	.015	.936	.017	.911	.020	.872	.024	.865	.025

	Year 1		Year 2		Year 3		Years 4, 5, & 6[b]	
	Est. prop.	Std. error	Est. prop.	Std. error	Est. prop.	Std. error	Est. prop.	Std. error
Exited to nonpermanent settings								
Full sample	.930	.030	.887	.038	.845	.043	.830	.045
Homelessness prevention	.974	.026	.921	.044	.868	.055	.841	.059
Rapid rehousing	.879	.057	.848	.062	.818	.067	.818	.067

Note. Est. prop. = estimated proportion of participants who did not re-enter homeless services; Std. error = standard error.
[a] No additional participants re-entered homeless services after Year 5. [b] No additional participants re-entered homeless services after Year 4.

Table 4
Univariate Cox Proportional Hazards Models for Re-Entry to Homeless Services Among Participants Exiting to Permanent Housing Settings

Predictors	Full sample		Homelessness prevention		Rapid rehousing	
	Hazard ratio	95% CI	Hazard ratio	95% CI	Hazard ratio	95% CI
Enrollment demographics						
Age	1.01	.99, 1.04	1.03	.97, 1.08	1.00	.97, 1.04
Male gender[a]	1.17	.60, 2.28	4.95*	1.03, 23.80	.58	.27, 1.25
Black/African American race/ethnicity[b]	1.81	.79, 4.13	.82	.21, 3.28	2.68[d]	.92, 7.78
Veteran	3.02**	1.54, 5.94	4.40*	1.18, 16.32	3.06**	1.36, 6.86
Disabling condition identified	1.50	.72, 2.13	1.26	.26, 6.09	1.46	.64, 3.36
Self-sufficiency	1.31	.66, 2.59	1.79	.50, 6.49	1.14	.51, 2.55
Income at program enrollment	1.00	1.00, 1.00	1.00	1.00, 1.00	1.00	1.00, 1.00
Program factors						
Rapid rehousing assistance[c]	2.45*	1.15, 5.22	—		—	
Completed HPRP	.72	.37, 1.41	.37	.10, 1.37	.93	.42, 2.10
Length of enrollment	1.00	1.00, 1.00	1.00	1.00, 1.01	1.00	1.00, 1.01
Rent payment	.69	.31, 1.51	.43	.11, 1.73	.80	.30, 2.12
Security deposit	1.94[d]	.93, 4.05	.68	.14, 3.26	2.08	.62, 6.93
Utility payment	1.42	.72, 2.79	1.06	.29, 3.96	1.66	.75, 3.66
Utility deposit	1.49	.74, 2.97	1.68	.35, 8.07	1.11	.50, 2.45
Rent arrears	.50	.21, 1.21	1.41	.38, 5.26	.23	.03, 1.73
Utility arrears	1.15	.59, 2.25	1.65	.44, 6.14	.88	.41, 1.92
Moving costs	1.52	.59, 3.92	2.97	.62, 14.32	1.06	.32, 3.53
Motel voucher	.65	.09, 4.71	—		.57	.08, 4.17
Case management	1.44	.34, 5.98	.54	.11, 2.61	—	
Outreach and engagement	.62	.28, 1.37	.29[d]	.72, 1.71	.95	.36, 2.52
Housing search and placement	1.06	.55, 2.06	1.26	.32, 5.06	.62	.28, 1.34
Credit repair	.92	.28, 2.99	3.78[d]	.78, 18.23	.31	.04, 2.28
Legal	.48	.07, 3.47	1.20	.15, 9.61	—	
Total financial assistance	1.00	1.00, 1.00	1.00	1.00, 1.00	1.00	1.00, 1.00
Circumstances at program exit						
Income at program exit	1.00	1.00, 1.00	1.00	1.00, 1.00	1.00	1.00, 1.01
Increased income at program exit	.31[d]	.09, 1.00	—		.48	.15, 1.61
Housed with a subsidy	2.15	.76, 6.10	—		1.64	.56, 4.76

Note. CI = confidence interval; HPRP = Homelessness Prevention and Rapid Re-Housing Program.
[a] The two transgender/gender-not-disclosed participants were omitted from univariate analysis. [b] Compared with other racial/ethnic groups collapsed. [c] Compared with homelessness prevention assistance. [d] Approached significance at $p < .10$.
* $p < .05$. ** $p < .01$.

ferred for homelessness prevention or rehousing assistance programs.

Compounding the need for additional research in this area, veterans in the current study had significantly higher average incomes than nonveterans, suggesting that veterans were perhaps better situated to remain housed in a short-term subsidy program. Why, then, were they more likely to re-enter homeless services? Several factors could contribute to this paradoxical result. Serving in the military introduces stressors and situations drastically different from the general population such as combat and deployments on different continents. These can result in health issues such as traumatic brain injury or social difficulties including disconnection with friends and family (U.S. Interagency Council on Homelessness, 2015). Such challenges create unique barriers to stable housing, employment, and relationships. Other environmental factors include a geographic concentration of veteran services. Veterans experiencing homelessness were found to be more likely to utilize medical, psychiatric, and substance abuse services compared with nonveterans (Petrovich et al., 2014). Therefore, it is also possible that the veterans in the present study were simply more connected to services than nonveterans, making them more likely to re-enter the homeless service system.

In terms of the local context, in 2014, Indianapolis provided 61% of the transitional housing beds and 77% of the emergency shelter beds reserved for veterans available in the state of Indiana (U.S. Department of Housing and Urban Development, 2014) in addition to a VA Medical Center and outreach clinic specifically for veterans. In contrast, Indianapolis provided only 30% of the nonveteran specific single adult emergency shelter, safe haven, and transitional beds available in Indiana (U.S. Department of Housing and Urban Development, 2014). Therefore, the risk of re-entry among veterans experiencing homelessness may have been, in part, a result of the greater number of VA-funded services available to them in the local jurisdiction than the services available to nonveteran single adults.

The discrepant re-entry outcomes between prevention and rapid rehousing assistance suggest there were likely unmeasured psychosocial risk factors for homelessness that differed between the subgroups in the present study. The connection between social capital (i.e., the network of relationships between individuals, their quality, and their benefits) and homelessness may help explain differences in outcome by type of assistance received. Although the current study did not have a measure of social capital, it is well-accepted in the literature that weak social capital is a risk

Table 5
Multivariate Cox Proportional Hazards Model for Re-Entry to Homeless Services Among the Full Sample Exiting to Permanent Housing Settings

Predictors	Hazard ratio	95% CI
Age	.99	.96, 1.02
Male gender[a]	.49[d]	.22, 1.11
Black/African American race/ethnicity[b]	1.52	.65, 3.53
Veteran	5.38***	2.27, 12.73
Rapid rehousing assistance[c]	2.30[d]	.99, 5.37
Security deposit	2.04[d]	.91, 4.55
Increased income at program exit	.28*	.08, .91

Note. 95% CI = confidence interval.
[a] The two transgender/gender-not-disclosed participants were omitted from the multivariate model. [b] Compared with other racial/ethnic groups collapsed. [c] Compared with homelessness prevention assistance. [d] Approaching significance at $p < .10$.
* $p < .05$. ** $p < .01$. *** $p < .001$.

factor for homelessness (Nooe & Patterson, 2010; Shinn, 2007), whereas stronger social capital has been associated with more positive general outcomes for homeless individuals and other socially marginalized groups (Furstenberg & Hughes, 1995; Trumbetta, Mueser, Quimby, Bebout, & Teague, 1999; Ware, Hopper, Tugenberg, Dickey, & Fisher, 2008). Indeed, this is one possible explanation for the better outcomes associated with homeless families than single adults, as families have built in social support among their members (see Sosin, George, Grossman, Hilvers, & Patel, 2011). Additionally, in a sample of individuals with and without histories of homelessness, a longer duration of homelessness was found to predict lower perceived social support (Bates & Toro, 1999). Taken together, it is possible that those who received homelessness prevention assistance possessed stronger social capital in the form of relationships they can rely on for support, whereas the social capital of those relying on rapid rehousing is weaker because of the deterioration of social relationships that likely accompanies entry to homelessness. From this perspective, programs may improve outcomes for this group by working with individuals to develop larger and stronger social networks. Given this, Housing First is one model of permanent supportive housing demonstrated to improve social networks of residents that may help to reduce re-entry to homeless services among those receiving rapid rehousing if delivered with fidelity to its essential components (Henwood et al., 2015; Watson, Wagner, & Rivers, 2013).

Primary and secondary homelessness prevention efforts prior to and during HPRP have addressed the challenge of efficient allocation of assistance to those most in need by targeting those with evidence-based risk factors for homelessness (Apicello, 2010; Burt et al., 2007; Culhane et al., 2011; Lindblom, 1991). One key risk factor for homelessness is insufficient income. Individual or family annual income below 50% of the area median income at HPRP entry was a requirement for eligibility, suggesting a clear economic need for financial assistance among program participants. Further, those who increased their income during HPRP had lower risk of return to services than those whose income did not increase, highlighting the benefit of programs emphasizing financial stability to support housing stability. However, low income as a sole indicator of risk may not be adequate for efficiently targeting prevention assistance, given the large population of individuals with low incomes in the United States who never become homeless (Culhane et al., 2011).

This study endeavored to identify additional risk factors for re-entry associated with prevention and rapid rehousing. Unfortunately, because of sample size limitations, few risk factors were illuminated in the two participant subgroups. Consistent with findings from SSVF, gender and ethnicity emerged as potential risk factors for re-entry (Byrne et al., 2016). Male recipients of prevention assistance were at greater risk of re-entry, and African American recipients of rapid rehousing trended toward greater risk. However, when controlling for other demographic and program variables, men trended toward having lower risk of re-entry. Those requiring financial assistance for security deposits had directionally higher risk of re-entry. Similarly, those in Byrne and colleagues' (2016) study who received rental assistance were at greater risk. These findings suggest that individuals who need financial assistance for housing at program entry may experience ongoing financial difficulties. Future research is needed to elucidate demographic and service-related risk factors of homelessness following temporary assistance.

In Indianapolis, targeting strategies focused around provider knowledge of their clients. In addition to identifying clients who were programmatically eligible for services, agencies were encouraged to consider goodness-of-fit for achieving housing stability after HPRP, including specifically targeting households who were homeless or at risk of homelessness because of the recession. Findings from an evaluation of Indianapolis' HPRP program indicated that case managers identified clients who demonstrated motivation and goal-directed behavior for HPRP assistance (Officer & Sauer, 2011). As a result, clients who frequently used homelessness services at that time may not have been specifically targeted for this particular assistance program (Officer & Sauer, 2011). Although the finding that those receiving prevention assistance had a lower risk of re-entry to services than those needing rehousing in the present investigation may have occurred for several reasons, one possibility is that some prevention assistance was allocated to those who had lower vulnerability to homelessness regardless of program participation. Interestingly, self-sufficiency matrix assessment scores were not predictive of re-entry, and the instrument had poor reliability in the present sample. Continued development of assessment tools used to guide housing service decisions is indicated. Future studies are needed to understand targeting practices implemented in the context of HPRP and the influence of effective and efficient targeting on long-term program outcomes.

There were limitations to the present study. In addition to the HMIS re-entry indicator serving only as a proxy for residential stability, administrative data may be prone to poor reliability and validity because they are not collected for research purposes. Moreover, the HMIS did not have complete information on potentially important variables including chronic homelessness status and education level based on program reporting requirements (U.S. Department of Housing and Urban Development, 2009b). Future, prospective studies of prevention and rehousing programs, or designs offering cross-validation of administrative data, are needed to enhance confidence in study findings. The study was further limited by the lack of detail regarding the specific aspects of support service implementation that were directly related to

participants' housing placement, so it is not clear whether or how the program did, in fact, influence participants' permanent housing status. Another limitation was the restriction of the study of a national program to a single homeless service jurisdiction. Findings may be specific to the context of services in Indianapolis and may not generalize to the broader population of single adults receiving HPRP assistance nationally. Multisite studies would provide an opportunity to examine HPRP outcomes while accounting for contextual factors, such as cost of living, housing stock, and HPRP funding allocated in each jurisdiction. Relatedly, the generalizability of the study findings were limited by the small sample size and the risk of Type II error, providing support for future studies with larger samples.

These preliminary findings suggest that the majority of single adults did not re-enter homeless services in Indianapolis following prevention and rapid rehousing assistance. Those characterized by veteran status and those whose income did not increase during the program are at greater risk of re-entry. The current policy and funding trends toward enhancement of primary and secondary homelessness prevention interventions may benefit from ongoing development of such interventions attending to the service needs of veterans and those currently experiencing homelessness, and ensuring individuals improve their economic independence during the program. Furthermore, continual low-intensity services, such as quarterly assessments, during the 24 months following program exit may help prevent re-entry to services during this potentially critical period. Finally, research on assessment strategies for identifying single adults most likely to achieve housing stability following prevention or rehousing services versus permanent supportive housing is necessary.

References

Apicello, J. (2010). A paradigm shift in housing and homeless services: Applying the population and high-risk framework to preventing homelessness. *The Open Health Services and Policy Journal, 3,* 41–52. http://dx.doi.org/10.2174/1874924001003020041

Bates, D. S., & Toro, P. A. (1999). Developing a measure to assess social support among homeless and poor people. *Journal of Community Psychology, 27,* 137–156. http://dx.doi.org/10.1002/(SICI)1520-6629(199903)27:2<137::AID-JCOP3>3.0.CO;2-B

Burt, M. R., Pearson, C., & Montgomery, A. E. (2007). Community-wide strategies for preventing homelessness: Recent evidence. *The Journal of Primary Prevention, 28,* 213–228. http://dx.doi.org/10.1007/s10935-007-0094-8

Byrne, T., Treglia, D., Culhane, D. P., Kuhn, J., & Kane, V. (2016). Predictors of homelessness among families and single adults after exit from homelessness prevention and rapid re-housing programs: Evidence from the Department of Veterans Affairs Supportive Services for Veteran Families program. *Housing Policy Debate, 26,* 252–274. http://dx.doi.org/10.1080/10511482.2015.1060249

Connecticut Coalition to End Homelessness. (n.d.). *Where are they now? Three years later, did rapid re-housing work in Connecticut?* Retrieved from http://cceh.quinnandhary.com/wp-content/uploads/2015/04/NEW_RRH_works_in_CT_FINAL_2013.10.10_CCEH.pdf

Culhane, D. P., Gross, K. S., Parker, W. D., Poppe, B., & Sykes, E. (2008). *Accountability, cost-effectiveness, and program performance: Progress since 1998*. Retrieved from http://repository.upenn.edu/spp_papers/114

Culhane, D. P., Metraux, S., & Byrne, T. (2011). A prevention-centered approach to homelessness assistance: A paradigm shift? *Housing Policy Debate, 21,* 295–315. http://dx.doi.org/10.1080/10511482.2010.536246

Culhane, D. P., Metraux, S., Park, J. M., Schretzman, M., & Valente, J. (2007). Testing a typology of family homelessness based on patterns of public shelter utilization in four U.S. jurisdictions: Implications for policy and program planning. *Housing Policy Debate, 18,* 1–28. http://dx.doi.org/10.1080/10511482.2007.9521591

Davis, T. H., & Lane, T. S. (2012). *Rapid re-housing of families experiencing homelessness in Massachusetts: Maintaining housing stability*. Retrieved from http://scholarworks.umb.edu/cgi/viewcontent.cgi?article=1060&context=csp_pubs

Fargo, J., Metraux, S., Byrne, T., Munley, E., Montgomery, A. E., Jones, H., . . . Culhane, D. (2012). Prevalence and risk of homelessness among US veterans. *Preventing Chronic Disease, 9,* E45.

Furstenberg, F. F., Jr., & Hughes, M. E. (1995). Social capital and successful development among at-risk youth. *Journal of Marriage and the Family, 57,* 580–592. http://dx.doi.org/10.2307/353914

Gubits, D., Shinn, M., Bell, S., Wood, M., Dastrup, S., Solari, C. D., . . . Abt Associates, Inc. (2015). *Family Options Study: Short-term impacts of housing and services interventions for homeless families*. Washington, DC: U.S. Department of Housing and Urban Development. Retrieved from http://www.huduser.gov/portal/sites/default/files/pdf/FamilyOptionsStudy_final.pdf

Henwood, B. F., Stefancic, A., Petering, R., Schreiber, S., Abrams, C., & Padgett, D. K. (2015). Social relationships of dually diagnosed homeless adults following enrollment in Housing First or traditional treatment services. *Journal of the Society for Social Work and Research, 6,* 385–406. http://dx.doi.org/10.1086/682583

Lindblom, E. N. (1991). Toward a comprehensive homeless-prevention strategy. *Housing Policy Debate, 2,* 957–1025. http://dx.doi.org/10.1080/10511482.1991.9521079

Montgomery, A. E., Metraux, S., & Culhane, D. (2013). Rethinking homelessness prevention among persons with serious mental illness. *Social Issues and Policy Review, 7,* 58–82. http://dx.doi.org/10.1111/j.1751-2409.2012.01043.x

Nooe, R. M., & Patterson, D. A. (2010). The ecology of homelessness. *Journal of Human Behavior in the Social Environment, 20,* 105–152. http://dx.doi.org/10.1080/10911350903269757

Officer, S., & Sauer, B. (2011). *Homeless Prevention and Rapid Re-Housing Program evaluation report: October 2009–September 2011*. Retrieved from http://www.chipindy.org/wp-content/uploads/2013/07/HPRP_Evaluation_Report.Dec_2011.pdf

Petrovich, J. C., Pollio, D. E., & North, C. S. (2014). Characteristics and service use of homeless veterans and nonveterans residing in a low-demand emergency shelter. *Psychiatric Services, 65,* 751–757. http://dx.doi.org/10.1176/appi.ps.201300104

Rodriguez, J. (2013). *Homelessness recurrence in Georgia*. Atlanta, GA: Georgia Department of Community Affairs. Retrieved from http://www.dca.state.ga.us/housing/specialneeds/programs/downloads/homelessnessrecurrenceingeorgia.pdf

Shinn, M. (2007). International homelessness: Policy, socio-cultural, and individual perspectives. *Journal of Social Issues, 63,* 657–677. http://dx.doi.org/10.1111/j.1540-4560.2007.00529.x

Shinn, M., Weitzman, B. C., Stojanovic, D., Knickman, J. R., Jiménez, L., Duchon, L., . . . Krantz, D. H. (1998). Predictors of homelessness among families in New York City: From shelter request to housing stability. *American Journal of Public Health, 88,* 1651–1657. http://dx.doi.org/10.2105/AJPH.88.11.1651

Sosin, M., George, C., Grossman, S. F., Hilvers, H., & Patel, K. (2011). *Final wave survey results: A preliminary evaluation of Chicago's ten year plan to end homelessness*. Chicago, IL: Center for Urban Research and Learning. Retrieved from http://static.squarespace.com/static/51e86261e4b00dfa7317c09b/51e9b18fe4b01c56e4d7e065/51e9b190e4b01c56e4d7e257/1365543999553/Final%20Wave%20Report%208-31-11.pdf

Trumbetta, S. L., Mueser, K. T., Quimby, E., Bebout, R., & Teague, G. B. (1999). Social networks and clinical outcomes of dually diagnosed homeless persons. *Behavior Therapy, 30,* 407–430. http://dx.doi.org/10.1016/S0005-7894(99)80018-5

Tsai, J., Mares, A. S., & Rosenheck, R. A. (2012). Do homeless veterans have the same needs and outcomes as non-veterans? *Military Medicine, 177,* 27–31. http://dx.doi.org/10.7205/MILMED-D-11-00128

U.S. Department of Housing and Urban Development. (2009a). *Notice of allocations, application procedures, and requirements for Homelessness Prevention and Rapid Re-Housing Program grantees under the American Recovery and Reinvestment Act of 2009*. Retrieved from http://www.hudexchange.info/resources/documents/HPRP_Notice_3-19-09.pdf

U.S. Department of Housing and Urban Development. (2009b). *HPRP HMIS data collection template instructions*. Retrieved from http://www.hudexchange.info/resources/documents/HPRP_HMISDataCollexInstrux_Oct09.pdf

U.S. Department of Housing and Urban Development. (2011). *Homelessness Prevention and Rapid Re-Housing Program: Year 1 summary*. Retrieved from http://www.hudexchange.info/resources/documents/HPRP_Year1Summary.pdf

U.S. Department of Housing and Urban Development. (2014). *HUD 2014 Continuum of Care Homeless Assistance Programs housing inventory count report: Indiana*. Retrieved from http://www.hudexchange.info/resource/reportmanagement/published/CoC_HIC_State_IN_2014.pdf

U.S. Department of Housing and Urban Development. (2016). *Homelessness Prevention and Rapid Re-Housing Program (HPRP): Year 3 and final program summary*. Retrieved from http://www.hudexchange.info/resources/documents/HPRP-Year-3-Summary.pdf

U.S. Interagency Council on Homelessness. (2015). *Opening Doors: Federal strategic plan to prevent and end homelessness*. Retrieved from http://www.usich.gov/resources/uploads/asset_library/USICH_OpeningDoors_Amendment2015_FINAL.pdf

Vittinghoff, E., & McCulloch, C. E. (2007). Relaxing the rule of ten events per variable in logistic and Cox regression. *American Journal of Epidemiology, 165,* 710–718. http://dx.doi.org/10.1093/aje/kwk052

Ware, N. C., Hopper, K., Tugenberg, T., Dickey, B., & Fisher, D. (2008). A theory of social integration as quality of life. *Psychiatric Services, 59,* 27–33. http://dx.doi.org/10.1176/ps.2008.59.1.27

Watson, D. P., Wagner, D. E., & Rivers, M. (2013). Understanding the critical ingredients for facilitating consumer change in housing first programming: A case study approach. *The Journal of Behavioral Health Services & Research, 40,* 169–179. http://dx.doi.org/10.1007/s11414-012-9312-0

Received March 21, 2016
Revision received September 3, 2016
Accepted September 8, 2016 ■